AQUATIC CONSERVATION STRATEGY APPENDIX

ACS Appendix - A: Age Classes by Drainage and by Land Use Allocation

ACS Appendix - B: Aquatic Conservation Strategy Objectives and Wildlife Species

ACS Appendix - C: Aquatic Conservation Strategy Objectives and Botanical Species

ACS Appendix - D: A Comparison Between ACS Objectives and the Pathways and Indicators Used in the

Effects Matrix

ACS Appendix - E: Site Potential Tree Height Determination for the South Fork Coos Watershed

ACS Appendix - A: Age Classes by Drainage and by Land Use Allocation South Fork Coos Fifth-field Watershed

												AGl	ECLASS		
DD 1 DV1 GD	***		NF	0	1	2	3	4	5	6	7	8	9		PERCENT
DRAINAGE	LUA	NF		0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	ACRES	ACRES
ARROW CR	GFMA IN BASE													0.0	0.00%
	GFMA WITHDRAWN													0.0	0.00%
	GFMA RR IN BASE													0.0	0.00%
	GFMA RR													0.0	0.00%
	WITHDRAWN														
	CON IN BASE													0.0	0.00%
	CON WITHDRAWN													0.0	0.00%
	CON RR IN BASE													0.0	0.00%
	CON RR													0.0	0.00%
	WITHDRAWN														
	LSR WITHDRAWN		16.0		123.0	57.0	80.1						351.2	627.3	72.78%
	LSR RR WITHDRAWN		7.7		68.8	4.7	67.6						85.9	234.7	27.22%
	TOTAL		23.7	0.0	191.9	61.7	147.7	0.0	0.0	0.0	0.0	0.0	437.1	862.0	100.00%
												AGI	ECLASS		
			NF	0	1	2	3	4	5	6	7	8	9	TOTAL	PERCENT
DRAINAGE	LUA	NF		0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	ACRES	ACRES
BEAR GULCH	GFMA IN BASE				37.0	24.6	27.8	6.9	7.2				11.9	115.4	29.53%
	GFMA WITHDRAWN													0.0	0.00%
	GFMA RR IN BASE		0.0		39.3	35.7	94.5	37.2	15.5				46.2	268.3	68.70%
	GFMA RR		6.9											6.9	1.77%
	WITHDRAWN														
	CON IN BASE													0.0	0.00%
	CON WITHDRAWN													0.0	0.00%
	CON RR IN BASE													0.0	0.00%
	CON RR WITHDRAWN													0.0	0.00%
	WIIIDKAWN														
	LSR WITHDRAWN													0.0	0.00%
	LSR RR WITHDRAWN TOTAL		7.0	0.0	76.3	60.3	122.2	44.2	22.7	0.0	0.0	0.0	58.1	0.0 390.6	0.00% 100.00%

												AG	ECLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
BOTTOM CR	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN	3												0.0 0.0 0.0 0.0	0.00% 0.00% 0.00% 0.00%
	CON IN BASE CON WITHDRAWN CON RR IN BASE CON RR WITHDRAWN	I 3		0.0	0.9 8.6	9.2 38.2							0.1	10.1 0.0 46.9 0.0	2.21% 0.00% 10.26% 0.00%
	LSR WITHDRAWN LSR RR WITHDRAWN TOTAL	I	3.4 0.6 4.0	0.0	31.2 10.6 51.3	66.3 15.5 129.2	0.0	0.0	0.0	0.0	0.0	0.0	253.2 19.6 272.9	354.0 46.3 457.4	77.40% 10.13% 100.00%
												AG	ECLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
BURNT CR	GFMA IN BASE GFMA WITHDRAWN	I	0.9					17.9	13.7					31.7 0.9	1.34% 0.04%
	GFMA RR IN BASE GFMA RR WITHDRAWN							34.2	47.3					81.5 0.0	3.44% 0.00%
	CON IN BASE CON WITHDRAWN CON RR IN BASE CON RR WITHDRAWN	I 3												0.0 0.0 0.0 0.0	0.00% 0.00% 0.00% 0.00%
	LSR WITHDRAWN LSR RR WITHDRAWN TOTAL	I	14.6 20.0 35.5	0.0	49.7 49.7 99.3	31.1 56.1 87.2	75.8 88.6 164.4	73.0 80.4 205.6	78.8 92.2 232.0	0.0	0.0	0.0 10.5 10.5	711.4 821.2 1532.6	1034.3 1218.7 2367.0	43.70% 51.48% 100.00%

												AG	ECLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
COAL CR	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN													0.0 0.0 0.0 0.0	
	CON IN BASE CON WITHDRAWN CON RR IN BASE CON RR WITHDRAWN	[]												0.0 0.0 0.0 0.0	
	LSR WITHDRAWN LSR RR WITHDRAWN TOTAL		4.6 17.1 21.6	0.0	0.4 13.4 13.8	63.5 174.1 237.5	60.5 174.7 235.1	17.0 30.6 47.6	0.0	0.0	0.0	0.0	420.4 677.8 1098.1	566.2 1087.5 1653.8	34.24% 65.76% 100.00%
												AG	ECLASS		
DRAINAGE	LUA	NF	NF	0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
COOS MOUTH	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN												7.6 0.7 19.2 12.1	7.6 0.7 19.2 12.1	0.23%
	CON IN BASE CON WITHDRAWN CON RR IN BASE CON RR WITHDRAWN	[]	1.6	0.5	2.3	0.7							9.1 47.0 5.0 171.8	12.1 47.0 5.4 173.4	

												AGI	ECLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
COX CR	GFMA IN BASE				4.7					57.3				62.0	4.16%
	GFMA WITHDRAWN													0.0	0.00%
	GFMA RR IN BASE GFMA RR				2.1					33.5				35.6 0.0	2.39% 0.00%
	WITHDRAWN													0.0	0.00%
	CON IN BASE													0.0	0.00%
	CON WITHDRAWN													0.0	0.00%
	CON RR IN BASE													0.0	0.00%
	CON RR WITHDRAWN													0.0	0.00%
	LSR WITHDRAWN		4.8	0.0	13.7	82.7	30.7	19.4	176.6				70.0	397.9	26.66%
	LSR RR WITHDRAWN		12.9	0.0	36.4	167.3	70.4	6.6	499.8	0.1			203.6	997.0	66.80%
	TOTAL	1	17.6	0.0	57.0	250.0	101.1	26.0	676.4	90.9	0.0	0.0	273.6	1492.6	100.00%
												AGI	ECLASS		
			NF	0	1	2	3	4	5	6	7	8	9	TOTAL	PERCENT
DRAINAGE	LUA	NF		0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	ACRES	ACRES
DANIELS CR	GFMA IN BASE			0.0	125.4	107.6	50.5	74.7	3.0	33.7	163.7	43.8	41.2	643.7	17.13%
	GFMA WITHDRAWN		2.0		5.5	0.4	0.4	2.5			2.2	2.3	19.3	34.4	0.92%
	GFMA RR IN BASE			0.0	110.6	167.4	98.7	35.1	0.2	23.2	164.0	76.4	38.0	713.7	18.99%
	GFMA RR WITHDRAWN		2.0		67.8	52.9	35.7	7.5	0.0	2.8	28.2	51.1	116.3	364.3	9.70%
	CON IN BASE			0.1	135.3	85.8	17.2	40.2					130.2	408.8	10.88%
	CON WITHDRAWN		1.0		2.2	1.2	4.0	0.1					76.8	85.4	2.27%
	CON RR IN BASE				65.3	58.3	8.9	34.5				0.1	87.5	254.5	6.77%
	CON RR WITHDRAWN		0.9		22.4	22.3	0.2	11.2				16.5	207.3	280.7	7.47%
	LSR WITHDRAWN		0.0		24.0	32.7				110.3		45.9	134.7	347.7	9.25%
	LSR WITHDRAWN LSR RR WITHDRAWN TOTAL		0.0 3.9 9.7	0.2	24.0 28.4 586.9	32.7 31.6 560.3	3.0 218.5	205.7	3.2	110.3 219.6 389.7	358.1	45.9 93.0 329.1	134.7 244.8 1096.0	347.7 624.3 3757.4	9.25% 16.61% 100.00%

												AGE	CLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
DELLWOOD	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN													0.0 0.0 0.0 0.0	0.00% 0.00% 0.00% 0.00%
	CON IN BASE CON WITHDRAWN CON RR IN BASE CON RR WITHDRAWN	[]												0.0 0.0 0.0 0.0	0.00% 0.00% 0.00% 0.00%
	LSR WITHDRAWN LSR RR WITHDRAWN													0.0 0.0	0.00%
	TOTAL		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ERR
												AGE	CLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
FALL CR	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN	1												0.0 0.0 0.0 0.0	0.00% 0.00% 0.00% 0.00%
	CON IN BASE CON WITHDRAWN CON RR IN BASE CON RR WITHDRAWN	[]												0.0 0.0 0.0 0.0	0.00% 0.00% 0.00% 0.00%
	LSR WITHDRAWN LSR RR WITHDRAWN													0.0 0.0	0.00% 0.00%

												AGI	CLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
GOOSE GULCH	GFMA IN BASE			3.2	2.9		11.6	87.9	13.1				5.4	124.1	14.32%
	GFMA WITHDRAWN	V	1.9					44.5						46.4	5.35%
	GFMA RR IN BASI			8.7	22.2		29.8	330.2	30.7				2.1	423.7	48.88%
	GFMA RF WITHDRAWN		4.9					260.1	7.6					272.5	31.44%
	CON IN BASI	Е												0.0	0.00%
	CON WITHDRAWN													0.0	0.00%
	CON RR IN BASI													0.0	0.00%
	CON RF WITHDRAWN													0.0	0.00%
	LSR WITHDRAWN													0.0	0.00%
	LSR RR WITHDRAWN													0.0	0.00%
	TOTAL	_	6.8	11.9	25.1	0.0	41.4	722.6	51.4	0.0	0.0	0.0	7.5	866.8	100.00%
												AGI	CLASS		
			NF	0	1	2	3	4	5	6	7	8	9	TOTAL	PERCENT
DRAINAGE	LUA	NF		0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	ACRES	ACRES
LITTLE COW CR	GFMA IN BASE													0.0	0.00%
	GFMA WITHDRAWN	1												0.0	0.00%
	GFMA RR IN BASI													0.0	0.00%
	GFMA RF WITHDRAWN													0.0	0.00%
	CON IN BASI	Е												0.0	0.00%
	CON WITHDRAWN													0.0	0.00%
	CON RR IN BASI													0.0	0.00%
	CON RE WITHDRAWN													0.0	0.00%
	LSR WITHDRAWN	J			5.1	5.3	5.0	2.2					32.6	50.3	32.63%
					5.1	5.3	5.0	2.3							
	LSR RR WITHDRAWN TOTAL	٧	0.5	0.0	29.5 34.6	0.3 5.6	17.5 22.5	12.7 15.0	0.0	0.0	0.0	0.0	43.4 76.0	103.8 154.1	67.37% 100.00%

												AGE	CLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
	20.1	- 112				10 12								1101125	- ITOTALE
LOST1 CR	GFMA IN BASE													0.0	0.00%
	GFMA WITHDRAWN													0.0	0.00%
	GFMA RR IN BASE GFMA RR													0.0	0.00% 0.00%
	WITHDRAWN													0.0	0.00%
	CON IN BASE													0.0	0.00%
	CON WITHDRAWN													0.0	0.00%
	CON RR IN BASE													0.0	0.00%
	CON RR WITHDRAWN													0.0	0.00%
	WIIHDRAWN														
	LSR WITHDRAWN													0.0	0.00%
	LSR RR WITHDRAWN		0.0		0.0		0.0	0.0	0.0			0.0		0.0	
	TOTAL		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ERR
												AGE	CLASS		
			NF	0	1	2	3	4	5	6	7	8	9	TOTAL	PERCENT
DRAINAGE	LUA	NF		0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	ACRES	ACRES
LOWER CEDAR CR	GFMA IN BASE													0.0	0.00%
	GFMA WITHDRAWN													0.0	0.00%
	GFMA RR IN BASE													0.0	0.00%
	GFMA RR													0.0	0.00%
	WITHDRAWN														
	CON IN BASE				23.6		7.8						3.7	35.1	39.88%
	CON WITHDRAWN						1.0						1.2	2.2	
	CON RR IN BASE			0.0	5.5		19.4		1.7				11.0	37.7	42.82%
	CON RR WITHDRAWN						6.0						7.0	13.0	14.81%
	LSR WITHDRAWN													0.0	0.00%
	LSR WITHDRAWN LSR RR WITHDRAWN													0.0 0.0	0.00% 0.00%

												AG	ECLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
LOWER TIOGA CR	GFMA IN BASE													0.0	0.00%
	GFMA WITHDRAWN													0.0	0.00%
	GFMA RR IN BASE													0.0	0.00%
	GFMA RR WITHDRAWN													0.0	0.00%
	CON IN BASE													0.0	0.00%
	CON WITHDRAWN													0.0	0.00%
	CON RR IN BASE													0.0	0.00%
	CON RR WITHDRAWN													0.0	0.00%
	LSR WITHDRAWN		9.7	8.3	97.9	190.8	304.5	193.1	127.2			30.0	685.3	1646.7	31.85%
	LSR RR WITHDRAWN		66.3	17.1	140.2	564.3	708.0	302.8	465.1	31.9		42.4	1185.5	3523.6	68.15%
	TOTAL		76.0	25.4	238.1	755.2	1012.5	495.9	592.2	31.9	0.0	72.4	1870.8	5170.2	100.00%
												AC	ECL ASS		
												AG	ECLASS		
			NIC	0	1	2	2	4	-		7	0	0	TOTAL	DEDOENE
DRAINAGE	LUA	NF	NF	0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
LOWER WILLIAMS	LUA GFMA IN BASE	NF	NF												
	GFMA IN BASE		NF											0.0	0.00%
LOWER WILLIAMS	GFMA IN BASE GFMA WITHDRAWN		NF											0.0 0.0	0.00% 0.00%
LOWER WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE		NF											0.0 0.0 0.0 0.0	0.00% 0.00% 0.00%
LOWER WILLIAMS	GFMA IN BASE GFMA WITHDRAWN		NF											0.0 0.0	0.00% 0.00%
LOWER WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR		NF											0.0 0.0 0.0 0.0	0.00% 0.00% 0.00%
LOWER WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN CON IN BASE CON WITHDRAWN		NF 3.4	0	1-9 15.3	10-19 11.2 5.9	20-29		40-49				116.5 29.2	0.0 0.0 0.0 0.0 0.0 38.5	0.00% 0.00% 0.00% 0.00% 12.24% 3.29%
LOWER WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN CON IN BASE CON WITHDRAWN CON RR IN BASE		3.4		1-9	11.2 5.9 27.2							116.5 29.2 158.5	0.0 0.0 0.0 0.0 0.0 38.5 215.2	0.00% 0.00% 0.00% 0.00% 12.24%
LOWER WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN CON IN BASE CON WITHDRAWN			0	1-9 15.3	10-19 11.2 5.9	20-29		40-49				116.5 29.2	0.0 0.0 0.0 0.0 0.0 38.5	0.00% 0.00% 0.00% 0.00% 12.24% 3.29%
LOWER WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN CON IN BASE CON WITHDRAWN CON RR IN BASE CON RR		3.4	0	1-9 15.3	11.2 5.9 27.2	20-29		40-49				116.5 29.2 158.5	0.0 0.0 0.0 0.0 0.0 38.5 215.2	0.00% 0.00% 0.00% 0.00% 12.24% 3.29% 18.41%
LOWER WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN CON IN BASE CON WITHDRAWN CON RR IN BASE CON RR WITHDRAWN		3.4	0	1-9 15.3	11.2 5.9 27.2 16.5	0.1		40-49			70-79	116.5 29.2 158.5 7.5	0.0 0.0 0.0 0.0 38.5 215.2 26.5	0.00% 0.00% 0.00% 0.00% 12.24% 3.29% 18.41% 2.26%

	=										AG	ECLASS		
DRAINAGE	LUA 1	NI NF	F 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
DRAINAGE	LUA	NF .	<u> </u>	1-9	10-19	20-29	30-39	40-49	30-39	00-09	70-79	0U+	ACKES	ACKES
MIDDLE TIOGA CR	GFMA IN BASE												0.0	0.00%
	GFMA WITHDRAWN												0.0	0.00%
	GFMA RR IN BASE												0.0	0.00%
	GFMA RR WITHDRAWN												0.0	0.00%
	CON IN BASE												0.0	0.00%
	CON WITHDRAWN												0.0	0.00%
	CON RR IN BASE												0.0	0.00%
	CON RR WITHDRAWN												0.0	0.00%
	WIIIDKAWN													
	LSR WITHDRAWN	20.		76.3	45.3	87.4	65.5	16.4		151.8	102.4	412.0	977.5	27.50%
	LSR RR WITHDRAWN_	66.		149.0	139.0	251.3	180.6	103.7	0.0	339.5	177.4	1169.4	2576.7	72.50%
	TOTAL	87.	1 0.1	225.3	184.4	338.7	246.1	120.1	0.0	491.3	279.8	1581.4	3554.2	100.00%
	=											ECLASS		
DPAINACE	= 1114 P	NI NE		1	2	3	4	5	6 50-50	7	8	9	TOTAL	PERCENT
DRAINAGE	LUA N	NF	F 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69			TOTAL ACRES	PERCENT ACRES
DRAINAGE MIDDLE WILLIAMS R	LUA I										8	9		
MIDDLE WILLIAMS			0	1-9	10-19		30-39				8 70-79	9 80 +	ACRES	ACRES
MIDDLE WILLIAMS	GFMA IN BASE		0	1-9 8.7	5.2		30-39				8 70-79 1.8	9 80 +	ACRES 21.8	12.76%
MIDDLE WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR		0.4	8.7 0.3	5.2 0.4		4.3				8 70-79 1.8 3.4	9 80 + 1.5 0.5	21.8 4.7	12.76% 2.72%
MIDDLE WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE	NF	0.4	8.7 0.3 27.8	5.2 0.4 15.1		4.3				8 70-79 1.8 3.4 0.3	9 80 + 1.5 0.5	21.8 4.7 53.4	12.76% 2.72% 31.19%
MIDDLE WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR	NF	0.4	8.7 0.3 27.8	5.2 0.4 15.1		4.3				8 70-79 1.8 3.4 0.3	9 80 + 1.5 0.5	21.8 4.7 53.4	12.76% 2.72% 31.19%
MIDDLE WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN CON IN BASE CON WITHDRAWN	NF	0.4 2.3 8	8.7 0.3 27.8	5.2 0.4 15.1 2.1		4.3				8 70-79 1.8 3.4 0.3	9 80+ 1.5 0.5 2.7	21.8 4.7 53.4 10.8	12.76% 2.72% 31.19% 6.32%
MIDDLE WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN CON IN BASE CON WITHDRAWN CON RR IN BASE	3.	0.4 2.3 8	8.7 0.3 27.8	10-19 5.2 0.4 15.1 2.1 14.7 0.6 40.7		4.3				8 70-79 1.8 3.4 0.3	9 80+ 1.5 0.5 2.7 5.6 0.1 6.6	21.8 4.7 53.4 10.8 20.3 1.9 48.0	12.76% 2.72% 31.19% 6.32% 11.86% 1.11% 28.07%
MIDDLE WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN CON IN BASE CON WITHDRAWN	NF 3.	0.4 2.3 8	8.7 0.3 27.8	10-19 5.2 0.4 15.1 2.1 14.7 0.6		4.3	40-49			8 70-79 1.8 3.4 0.3	9 80+ 1.5 0.5 2.7 5.6 0.1	21.8 4.7 53.4 10.8 20.3 1.9	12.76% 2.72% 31.19% 6.32% 11.86% 1.11%
MIDDLE WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN CON IN BASE CON WITHDRAWN CON RR IN BASE CON RR WITHDRAWN	3.	0.4 2.3 8	8.7 0.3 27.8	10-19 5.2 0.4 15.1 2.1 14.7 0.6 40.7		4.3	40-49			8 70-79 1.8 3.4 0.3	9 80+ 1.5 0.5 2.7 5.6 0.1 6.6	21.8 4.7 53.4 10.8 20.3 1.9 48.0 10.2	12.76% 2.72% 31.19% 6.32% 11.86% 1.11% 28.07% 5.98%
MIDDLE WILLIAMS	GFMA IN BASE GFMA WITHDRAWN GFMA RR IN BASE GFMA RR WITHDRAWN CON IN BASE CON WITHDRAWN CON RR IN BASE CON RR	3.	0.4 2.3 8	8.7 0.3 27.8	10-19 5.2 0.4 15.1 2.1 14.7 0.6 40.7		4.3	40-49			8 70-79 1.8 3.4 0.3	9 80+ 1.5 0.5 2.7 5.6 0.1 6.6	21.8 4.7 53.4 10.8 20.3 1.9 48.0	12.76% 2.72% 31.19% 6.32% 11.86% 1.11% 28.07%

												AGI	ECLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
MINK CR	GFMA IN BASE													0.0	0.00%
	GFMA WITHDRAWN													0.0	0.00%
	GFMA RR IN BASE													0.0	0.00%
	GFMA RR WITHDRAWN													0.0	0.00%
	CON IN BASE													0.0	0.00%
	CON WITHDRAWN													0.0	0.00%
	CON RR IN BASE CON RR													0.0	0.00% 0.00%
	WITHDRAWN													0.0	0.00%
	LSR WITHDRAWN		8.1		43.4	85.7	88.0	57.7	1.7				206.1	490.9	33.31%
	LSR RR WITHDRAWN		28.8	0.0	50.2	154.3	225.3	68.0					456.3	982.9	66.69%
	TOTAL	3	36.9	0.0	93.6	240.0	313.3	125.7	1.7	0.0	0.0	0.0	662.5	1473.8	100.00%
												AGI	ECLASS		
			NF	0	1	2	3	4	5	6	7	8	9	TOTAL	PERCENT
DRAINAGE	LUA	NF		0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	ACRES	ACRES
PANTHER CR	GFMA IN BASE			0.0		7.0		31.8			73.0		0.1	112.0	15.07%
	GFMA WITHDRAWN		1.8					24.5			0.4		0.0	2.1	0.29%
	GFMA RR IN BASE GFMA RR		2.1			7.7		24.5			31.2 15.1		0.2	63.4 17.1	8.54% 2.31%
	WITHDRAWN		2.1								13.1			17.1	2.31%
	CON IN BASE			0.0	11.2	22.1					52.9		68.2	154.4	20.78%
	CON WITHDRAWN		3.2										24.4	27.6	3.71%
	CON RR IN BASE				15.0	40.3					48.6		63.2	167.1	22.48%
	CON RR WITHDRAWN		5.6										92.7	98.4	13.23%
	LSR WITHDRAWN			0.0		0.0					18.4		34.1	52.6	7.08%
	LSR RR WITHDRAWN			0.0	26.2	0.1	0.6		0.6	0.6	17.3	0.6	31.1	48.5	6.52%
	TOTAL	1	12.6	0.0	26.2	77.1	0.0	56.3	0.0	0.0	256.9	0.0	314.1	743.2	100.00%

												AGI	ECLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
DRITIVIOE	LUA	111			1-7	10-17	20-27	30-37	40-42	30-37	00-02	10-17	001	ACKES	ACKES
SF COOS R	GFMA IN BASE				16.7		19.5	40.2	9.5	8.9			11.4	106.1	7.28%
	GFMA WITHDRAWN		1.7				0.0						6.3	8.0	0.55%
	GFMA RR IN BASE				41.9		23.8	32.9	14.3	41.0			7.3	161.2	11.05%
	GFMA RR WITHDRAWN		0.5	0.0	1.1		15.4	1.7	2.9	33.6			17.5	82.6	5.66%
	CON IN BASE							13.3						13.3	0.91%
	CON WITHDRAWN	(0.4											0.4	0.02%
	CON RR IN BASE							41.5						41.5	2.84%
	CON RR WITHDRAWN		3.1					8.0						11.1	0.76%
	LSR WITHDRAWN	. 4	4.9		52.1	70.4	40.0	7.2	57.8				161.8	394.2	27.02%
	LSR RR WITHDRAWN		3.7		47.1	147.2	67.1	8.0	111.5				246.1	640.6	43.91%
	TOTAL	34	4.1	0.0	158.9	217.6	165.9	152.6	196.0	83.5	0.0	0.0	450.3	1458.9	100.00%
												AGI	ECLASS		
		I	NF	0	1	2	3	4	5	6	7	8	9	TOTAL	PERCENT
DRAINAGE	LUA	NF		0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	ACRES	ACRES
UPPER CEDAR CR	GFMA IN BASE			0.0	63.3	41.4	14.9	33.0	74.3			6.7	143.5	377.1	25.91%
CITER CEDIM CR	GFMA WITHDRAWN		5.5	0.0	4.4	11.1	11	33.0	7 1.5			0.7	13.9	23.8	1.63%
	GFMA RR IN BASE				74.3	106.0	12.9	11.1	32.7			26.3	184.1	447.4	30.74%
	GFMA RR WITHDRAWN	10	6.9		3.9								2.3	23.0	1.58%
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,														
	CON IN BASE					27.2	11.4			9.0		18.2	39.8	105.6	7.26%
	CON WITHDRAWN		1.4			0.1						11.0		12.5	0.86%
	CON RR IN BASE		0.4			87.7	14.0			2.8		7.1	127.4	239.1	16.42%
	CON RR WITHDRAWN		8.4									10.4		18.8	1.29%
	LSR WITHDRAWN								2.1				33.2	35.4	2.43%
	LSR RR WITHDRAWN	1	1.0						5.6				166.5	173.0	11.88%
	TOTAL	33	3.1	0.0	145.9	262.5	53.1	44.0	114.7	11.8	0.0	79.6	710.7	1455.4	100.00%

												AG	ECLASS		
DRAINAGE	LUA	NF	NF	0 0	1 1-9	2 10-19	3 20-29	4 30-39	5 40-49	6 50-59	7 60-69	8 70-79	9 80 +	TOTAL ACRES	PERCENT ACRES
UPPER TIOGA CR	GFMA IN BASE			3.5	34.9	79.5	79.9	176.0	161.5				104.2	639.5	13.64%
	GFMA WITHDRAWN		10.1			1.2	6.2	1.8	0.1					19.3	0.41%
	GFMA RR IN BASE			0.6	119.2	417.3	417.7	411.6	374.9				317.8	2059.1	43.93%
	GFMA RR WITHDRAWN		31.3		4.3	3.1	31.1	23.7	2.1				0.7	96.2	2.05%
	CON IN BASE													0.0	0.00%
	CON WITHDRAWN													0.0	0.00%
	CON RR IN BASE													0.0	0.00%
	CON RR WITHDRAWN													0.0	0.00%
	LSR WITHDRAWN		11.0	0.0	83.1	79.9	39.8	212.4					334.7	760.9	16.23%
	LSR RR WITHDRAWN		4.7		35.7	171.9	102.5	115.1					682.2	1112.1	23.73%
	TOTAL		57.1	4.0	277.2	752.9	677.1	940.5	538.7	0.0	0.0	0.0	1439.6	4687.0	100.00%
												AG	ECLASS		
			NF	0	1	2	3	4	5	6	7	8	9		PERCENT
DRAINAGE	LUA	NF		0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	ACRES	ACRES
WILLIAMS R	GFMA IN BASE													0.0	0.00%
	GFMA WITHDRAWN													0.0	0.00%
	GFMA RR IN BASE													0.0	0.00%
	GFMA RR WITHDRAWN													0.0	0.00%
	CON IN BASE													0.0	0.00%
	CON WITHDRAWN													0.0	0.00%
	CON RR IN BASE													0.0	0.00%
	CON RR													0.0	0.00%
	WITHDRAWN														
	LSR WITHDRAWN													0.0	0.00%
			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0	0.00% 0.00% ERR

												AGI	ECLASS		
	•		NF	0	1	2	3	4	5	6	7	8	9	TOTAL	PERCENT
DRAINAGE	LUA	NF		0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	ACRES	ACRES
WILSON CR	GFMA IN BASE				0.1		19.3						0.1	19.4	4.07%
	GFMA WITHDRAWN													0.0	0.00%
	GFMA RR IN BASE						27.4						2.0	29.4	6.18%
	GFMA RR		0.5											0.5	0.10%
	WITHDRAWN														
	CON IN BASE													0.0	0.00%
	CON WITHDRAWN													0.0	0.00%
	CON RR IN BASE													0.0	0.00%
	CON RR													0.0	0.00%
	WITHDRAWN														
	LSR WITHDRAWN		2.3	0.2	2.4	0.4	77.9	0.2					187.3	270.6	56.77%
	LSR RR WITHDRAWN		1.7				55.5	0.0					99.5	156.7	32.87%
	TOTAL		4.5	0.2	2.4	0.4	180.1	0.2	0.0	0.0	0.0	0.0	288.9	476.6	

ACS Appendix - B: Aquatic Conservation Strategy Objectives and Wildlife Species (Wildlife Species For Consideration)

Table WL-RRD-1 contains the list of Species of Consideration that were initially considered during the Riparian Delineation Module (Appendix B of Riparian Reserve Evaluation Techniques and Synthesis, RIEC 1997). Table WL-RRD-2 contains a final list of species (in the shaded blocks) to be considered when evaluating Riparian Reserve widths.

The following five J2 species would be affected by delineating a Riparian Reserve width that is less than the interim width: papillose tail-dropper, blue-grey tail-dropper, Oregon megomphix, southern torrent salamander, and tailed frog. Surveys for their presence would be required before Riparian Reserve widths were reduced. Three others that are not J2 species but should be considered are the Del Norte salamander, white-footed vole and bald eagle. Del Norte salamanders should be surveyed for if the interim Riparian Reserve is within the range designated in the Survey and Manage Protocol. Survey methods have not been successful in detecting the white-footed vole. Surveys should be implemented for white-footed voles after protocols are developed, but the Riparian Reserve Delineation process should not be tabled while waiting for the protocol. The bald eagle received a 100-0-0-0 rating under both FEMAT Option 1 and 9. However, management direction in the RMP (USDI 1994) is to provide a 0.25 mile radius buffer around known and future nest sites, which may be contained in the Riparian Reserves being considered for width reduction.

If any of the eight species (or suitable habitat for those species) are found present inside the interim Riparian Reserve, then the Riparian Reserve width on intermittent streams in that area will remain at 1-site potential tree. Management activity inside that area of the Riparian Reserve should be either neutral or beneficial for those species, and it should always be consistent with the Aquatic Conservation Strategy objectives.

FEMAT Ratings for Wildlife: For this process, the FEMAT (1993) ratings for Option 1 and Option 9 were compared for the species listed in the shaded blocks of Table WL-RRD-2 Wildlife Species Ecological Classification. Though there were other differences between the Options, this review focused on riparian widths. Riparian Reserve buffer widths were expressed as multiples of the height of a site-potential tree, measured on each side of: fish bearing streams; non-fish bearing streams; and intermittent streams, respectively. In the draft version, Option 1 riparian widths were 2:1:1, while Option 9 widths were 2:1:1 in Aquatic Conservation Emphasis Key Watersheds, and 2:1:1/2 for other watersheds.

The FEMAT ratings for Projected Future Likelihoods of Habitat Outcomes Under Land Management Options evaluated 4 outcomes (FEMAT 1993, pg IV-43) under each Option. Our target is to manage for the Option that was judged to have an 80 percent or greater likelihood that the habitat on federal land would be sufficient to support well-distributed stable populations over the next 100 years (Outcome A) (FEMAT 1993 pg II-28).

Based on a watershed scale evaluation, reducing Riparian Reserve widths on intermittent streams to a half-site potential tree could reduce the likelihood below 80 percent of having a well distributed stable population over the next 100 years for 2 of the J2 species (southern torrent salamander and tailed frog).

The bald eagle and Del Norte salamander rated above the 80 percent level on both Option 1 and Option 9. The mollusk species rated under the 80 percent level on both Options. Refer to FEMAT (1993) and Appendix J2 (1994) for an explanation of the ratings and mitigation measures for the above species. No modification of the Riparian Reserve can be made until field evaluations are completed.

Table WL-RRD-1. Riparian Reserve Delineation - Wildlife Species of Consideration for the South Fork Coos Watershed.

Species of Consideration	Reference for Consideration ¹	Source Habitat ² Exclusive	Source Habitat Supplemental	Dispersal ³ Restricted	Dispersal Broad	Distribution ⁴ Localized	Distribution Wide	Abundance Rare	Abundance Common
Southern torrent salamander	List 1, J2	X		X		X		X	
Tailed frog	List 1, 2, J2	X			X		X	X	
Clouded salamander	List 2		X		X		X	X	
Del Norte salamander	List 2, S/M		X	X		X		X	
Dunn's salamander	List 2	X			X		X		X
Northwestern salamander	List 2	X			X		X		X
Pacific giant salamander	List 2	X			X		X		X
Rough-skinned newt	List 2	X			X		X		X
Common merganser	List 1, J2	X			X		X		X
Marbled murrelet	List 2		X		X		X	X	
Northern spotted owl	List 2		X		X		X	X	
Fringed myotis	List 1, S/M, J2	(Feeding)	X		X		X	X	
Hoary bat	List 1, J2	(Feeding, Resting)	X		X		X	X	
Long-eared myotis	List 1, S/M, J2	(Feeding)	X		X		X		X
Long-legged myotis	List 1, S/M, J2		X		X		X		X
Pallid bat	List 1, J2		X		X		X		X
Silver-haired bat	List 1, S/M, J2		X		X		X		X
Big brown bat	List 2	(Feeding, Resting)	X		X		X		X
California myotis	List 2	(Feeding)	X		X		X		X
Little brown myotis	List 2	X			X		X		X
Yuma myotis	List 2	X		X			X		X
American Marten	List 1, J2		X		X		X	X	
Fisher	List 1, J2		X		X		X	X	

Species of Consideration	Reference for Consideration ¹	Source Habitat ² Exclusive	Source Habitat Supplemental	Dispersal ³ Restricted	Dispersal Broad	Distribution ⁴ Localized	Distribution Wide	Abundance Rare	Abundance Common
Red tree vole	List 1, 2, J2		X	X			X	X	
Papillose tail-dropper	List 2, J2, S/M	X		X		X		X	
Osprey	Potential species		X		X		X		X
Bald Eagle	Potential species	X			X		X	X	
Northern goshawk	Potential species		X		X		X	X	
Northern pygmy-owl	Potential species		X		X		X		X
Pileated woodpecker	Potential species		X		X		Х		X
Pacific Western big-eared bat	Potential, J2		X		X		X	X	
White-footed vole	Potential species	х		X			X	X	
Oregon Megomphix	Pot. sp., J2, S/M		X	X		X		X	
Blue-grey tail-dropper	Pot. sp. J2, S/M		X	X		X		X	

 $^{^{1}}$ List 1 and 2 are from the Appendix B of the Riparian Reserve Module (RIEC 1997).

Selection for species that are <u>Exclusive</u> and are also either Rare <u>OR</u> Localized.

Selection process for species that are Localized and Rare.

Flagged species

² Source Habitat designation from RIEC (1997), Thomas et al. (1993) and Brown et al. (1985). X = Exclusive source habitat, B = Breeding habitat, F = Feeding habitat, R = Resting habitat.

³ Dispersal Habitat from RIEC (1997), Thomas et al. (1993), and field guides.

⁴ Distribution and Abundance rating from RIEC (1997), Thomas et al. (1983) and J2 (1994).

Table WL-RRD -2. Ecological Classification of Wildlife Species for Preliminary Vulnerability Assessment¹

	Localized & Rare	Widely Distributed & Rare OR Localized and Common	Widely Distributed & Common
Exclusive and Restricted	Mollusks Papillose tail-dropper Amphibians Southern torrent salamander	Mammals White-footed vole ²	Bats Yuma myotis
Exclusive and Broad		Amphibians Tailed frog Birds Bald eagle	Amphibians Dunn's Salamander Northwestern Salamander Pacific Giant Salamander Rough-skinned newt Birds Common merganser Bats Little brown myotis
Supplemental and Restricted	Mollusks Oregon Megomphix Blue-grey tail-dropper Amphibians Del Norte Salamander	Mammals Red tree vole	
Supplemental and Broad		Amphibians Clouded salamander Birds Marbled murrelet Northern spotted owl Northern goshawk Bats Fringed myotis Hoary bat Pacific western big-eared bat Mammals American marten Fisher	Bats Long-eared myotis Long-legged myotis Pallid bat Silver-haired bat Big brown bat California myotis Birds Osprey Northern pygmy owl Pileated woodpecker

¹ This table corresponds to Table B5 in the Riparian Reserve Module (RIEC 1997 pg. RR-23) and gray shaded areas will be analyzed further (the other species are screened out).

² Survey methods have not been successful in detecting the white-footed vole. Implement surveys for the vole after protocols are developed, but do not table the Riparian Reserve Delineation process while waiting for the protocol.

Table WL-RRD-3 Ecological Classification for Wildlife Species that passed the Vulnerability Screen.

Species	Late- Successional	Riparian	Aquatic - lotic	Aquatic - lentic	Seeps / Springs	Rock Outcrops	Other
Mollusks							
* Oregon Megomphix		X					
* Blue-grey tail-dropper		X					
* Papillose tail-dropper		X				X**	
Amphibians							
Southern torrent salamander		X	X		X		
* Del Norte salamander	X	X				X	
Tailed frog	X	X	X	X			
Birds							
Bald eagle	X	X	X				
Mammals	-	·					_
White-footed vole		X					

Notes: This table corresponds to Table B6 in the Riparian Reserve Module (RIEC 1997)

Table WL-RRD-4. FEMAT Ratings for Projected Future Likelihoods of Habitat Outcomes Under Land Management Options by the Wildlife Species Listed in Table WL-RRD-2 In This Document.¹

WILDLIFE SPECIES	FEMAT - OPTION 1 (Outcome A-B-C-D)	FEMAT - OPTION 9 (Outcome A-B-C-D)	
Strict Aquatic/Riparian Dependencies			
Papillose tail-dropper	63-23-0-0	57-23-17-3	
Southern torrent salamander	81-19-0-0	74-23-3-1	
Tailed frog	93-8-0-0	78-20-3-0	
Bald eagle	100-0-0-0	100-0-0-0	
White-footed vole	N/A	N/A	
Benefitted by Riparian Reserves			
Oregon megomphix	43-40-17-0	13-33-37-17	
Blue-grey tail-dropper	65-30-5-0	50-25-15-10	
Del Norte salamander	93-8-0-0	90-10-0-0	

¹ See FEMAT (1993) for a detailed description of Options and explanation of the ratings for projected future likelihoods.

References:

Brown, E.R. et. al. 1985. Management of Wildlife and Fish Habitats in Forests of Western Oregon and Washington. 2 vol. USDA, FS. PNW. Portland, OR.

Forest Ecosystem Management: an Ecological, Economic, and Social Assessment (FEMAT). 1993. USDA and USDI. Portland, OR.

Holthausen, R.S. et al. 1994. Appendix J2 results of additional species analysis for: FSEIS on management of habitat

^{*} Indicates taxon addressed by Survey and Manage provisions

^{**} Through 1 year of local surveys it has been found that this species is not associated with rock outcrops.

for late-successional and old-growth forest related species within the range of the Northern spotted owl. USDA and USDI

Regional Interagency Executive Committee (RIEC).1997. Riparian Reserve Evaluation Techniques and Synthesis - Species Information Addendum to Appendix B. Version 2.2. Portland, OR.

Thomas et al. 1993. Viability assessments and management considerations for species associated with latesuccessional and old-growth forests of the Pacific Northwest. USDA Forest Service Research

ACS Appendix - C: Aquatic Conservation Strategy Objectives and Botanical Species

Table ACS-Botanical-1. Ecological Classification for Preliminary Vulnerability Assessment of Botanical Species Notes: This Table Corresponds to Table B5 in the Riparian Reserve Module (RIEC 1997)

Gray shaded areas will be analyzed further. The rest are screened out.

	Localized & Rare	Widely distributed & Rare or Localized and Common	Widely Distributed & Common
Exclusive and Restricted	Bryophytes Kurzia mackinoana Vascular plants Bensoniella oregana	Bryophytes Scoularia marginata* Lichens riparian Leptogium saturnium Cetralia cetraroides	Bryophytes Douinia ovata
Exclusive and Broad		Fungi Helvella compressa	Bryophytes Antitrichia curtipendula
Supplemental and Restricted	Vascular plants Aster vialis Cimicifuga elata	Fungi Clitocybe subditopoda Helvella maculata Phaeocollybia attenuata Phaeocollybia picea Phaeocollybia psuedofestiva Phaeocollybia scatesiae Phaeocollybia spadicea Lichens riparian Collema nigrescens Ramalina thrausta Platismatia lacunosa decaying wood & soil Cladonia umbricola Xylographa vitiligo rock Pilophorus acicularis Psorama hypnorum	Fungi Phaeocollybia californica Phaeocollybia fallax Phaeocollybia olivacea Galerina atkinsoniana Galerina cerina Galerina hetrocysis Galerina vittaeformis Lichens riparian Usnea longissima decaying wood & soil Cladonia bellidiflora
Supplemental and Broad		Fungi Helvella elastica Vascular plant Allotropa virgata	Fungi Helvella maculata Gomphus clavatus Gomphus floccosus Gomphus kauffmanii Survey and Manage Strategy 3&4 species Lichens forage Alectoria sarmentosa Alectoria vancouverensis Bryoria capillaris Bryoria glabra Usnea filipendula Usnea scabrata

^{*} Scouleria marginata does not occur in intermittent streams, which are under consideration for riparian reserve alteration.

Table ACS-Botanical-2: Species Ecological Classification

Notes: This Table Corresponds to Table B5 in the Riparian Reserve Module (RIEC 1997)

* Indicates taxon addressed by Survey and Manage provisions

Species	Late- Successional	Riparian	Aquatic -lotic	Aquatic -lentic	Seeps, springs	Rock outcrops	Other				
Bryophyte											
*Kurzia mackinoana		X									
Fungi											
*Helvella compressa		X									
Lichens	Lichens										
Leptogium saturnium Cetralia cetrariodes		X X									
Vascular plants											
*Bensoniella oregana					X						
*Aster vialis							X				
Cimicifuga elata							X				

Habitat Information for Riparian Species of Concern in the Watershed (Identified by Analysis Contained in Table ACS Botanical-2):

Kurzia mackinoana

We know very little about the habitat of this species in this region, as it is extremely rare. It seems to prefer shady, moist organic substrates. The range map for the species shows it to occur right along the coast, which suggests it is unlikely this species inhabits the Riparian Reserves in this Watershed.

Bensoniella oregana

Habitat: In California, along the periphery of meadows next to seeps and small streams in the true fir zone. In Oregon, similar habitats in the mixed conifer and mixed evergreen zones.

Substrate: Soils derived from ancient sedimentary rocks, with prolonged moisture and partial canopy cover.

It is unlikely that the Riparian Reserves under consideration have habitat for this species.

The northernmost known population is near Signal Tree Lookout on Kenyon Mtn., above Camas Valley. The Signal Tree site is also the lowest elevation where this species has been observed.

Helvella compressa

Gregarious on ground under redwood, oak, mature to old growth forests, in mixed stands and suburban backyards. Most of the analysis area may be considered potential habitat for this species. It has been found near streams in the Coos Bay District.

Leptogium saturinum

This widespread lichen grows on the bark of deciduous trees (and occasionally on rocks) in moist riparian forests at low elevation. Coos Bay District has no known locations of this species.

Cetralia cetrarioides

Sporadic throughout the Coast Range, it grows mainly on the bark of hardwoods. Most often found in older red alder stands over moist ground.

AQUATIC CONSERVATION STRATEGY APPENDIX

ACS Appendix - D: A Comparison Between ACS Objectives and the Pathways and Indicators Used in the Effects Matrix

from National Marine Fisheries Service Northwest Region. Endangered Species Act-Section 7 Consultation Biological Opinion and Conference Opinion - Implementation of land and Resources Management Plans (USFS) and Resource Management Plans (BLM), issued 3/18/97. Attachment 3 Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale, August 1996, Appendix C

Aquatic Conservation Strategy Objectives -Northwest Forest Plan	Pathways/ indicators
2, 4, 8, 9	Water Quality/ Temperature
4, 5, 6, 8, 9	Water Quality/ Sediment/ Turbidity
2, 4, 8, 9	Water Quality/ Chemical Concentration/ Nutrients
2, 6, 9	Habitat Access/ Physical Barriers
3, 5, 8, 9	Habitat Elements/ Substrate
3, 6, 8, 9	Habitat Elements/ Large Woody Debris
3, 8, 9	Habitat Elements/ Pool Frequency
3, 5, 6, 9	Habitat Elements/ Pool Quality
1, 2, 3, 6, 8, 9	Habitat Elements/ Off-Channel Habitat
1, 2, 9	Habitat Elements/ Refugia
3, 8, 9	Channel Condition/ Dynamics/ Width/ Depth Ratio
3, 8, 9	Channel Condition/ Dynamics Streambank Condition
1, 2, 3, 6, 7, 8, 9	Channel Condition/ Dynamics/ Floodplain Connectivity
5, 6, 7	Flow/ Hydrology/ Change in Peak/ Base Flow
2, 5, 6, 7	Flow/ Hydrology/ Increase in Drainage Network
1, 3, 5	Watershed Conditions/ Road Density & Location
1, 5	Watershed Conditions/ Disturbance History
1, 2, 3, 4, 5, 8, 9	Watershed Conditions/ Riparian Reserves

AQUATIC CONSERVATION STRATEGY APPENDIX

ACS Appendix - E: Site Potential Tree Height Determination for the South Fork Coos Watershed

Plot No.	twshp	range	sect.	FOI No.	Site Tree	s			Notes
(from 5-point inventory)					Species	Age	Total Ht	Site Index (McArdles 100-year)	
155	26	10	25	243036	DF	300	230	180	
						264	223	178	
						236	220	179	
591	26	10	23	240369	DF	26	78	200	
						27	68	167	
						24	71	202	
						29	74	168	
						27	79	194	
						28	82	189	
						28	78	184	
						28	78	184	
						28	78	184	
530	26	11	1	240505	DF	56	133	178	
						55	133	180	
						57	125	165	
213	27	9	26	240691	DF	432	223	166	
						289	226	178	
						529	214	154	
141	26	10	24	240387	DF	30	95	208	
						31	88	186	
						30	84	184	
						30	88	182	
						32	91	187	
136	26	12	13	241393	DF	69	128	152	
						69	139	165	
						68	114	136	
134	26	12	12	242274	DF	115	195	186	measured during 1978 inventory
						97	180	182	
						85	178	191	
130	26	10	3	243031	DF	228	211	173	measured during 1968 inventory
						233	233	190	
						239	215	175	

Plot No.	twshp	range	sect.	FOI No.	Site Tree	s			Notes
(from 5-point inventory)					Species	Age	Total Ht	Site Index (McArdles 100-year)	
131	26	10	11	243122	DF	227	228	187	
						251	236	190	
						393	278	209	
139	26	10	13	242077	DF	237	213	173	
						233	197	160	
						193	198	168	
541	26	12	13	242276	DF	69	128	152	
						69	139	165	
						68	114	136	
127	25	10	31	240042	DF	40	95	160	
						44	96	151	
						44	103	162	
140	27	9	14	241272	DF	173	180	156	
						151	192	171	
						142	187	170	
151	26	9	21	240105	DF	183	189	161	measured during 1978 inventory
						183	188	161	
						172	196	170	
165	27	8	2	241297	DF	51	89	126	
						68	104	124	
						53	90	124	
166	27	8	4	241302	DF	62	114	144	
						68	122	146	
						66	136	166	
167	27	9	5	240545	DF	78	158	176	
						65	156	191	
						67	166	201	
168	27	10	1	240762	DF	102	163	162	
						55	97	131	
						44	83	130	
176	27	9	7	240551	DF	54	112	153	
						63	130	164	
						69	129	153	

Plot No.	twshp	range	sect.	FOI No.	Site Tree	s			Notes
(from 5-point inventory)					Species	Age	Total Ht	Site Index (McArdles 100-year)	
177	27	9	9	242885	DF	50	91	130	
						55	94	127	
						54	89	122	
179	27	9	17	240606	DF	125	167	151	
						261	157	125	
						237	179	145	
180	27	10	13	240863	DF	62	120	151	
						67	150	182	
						67	149	181	
505	27	9	10	240574	DF	362	210	161	measured during 1978 inventory
						368	212	161	
						392	208	156	
589	27	9	22	240642	DF	27	67	182	
						27	55	135	
						27	70	171	
						27	61	150	
						27	60	148	
Average Site	Index for	the Sout	h Fork (Coos Water	shed:			166	

An 166-foot site index (100-year base) = A 220-foot site potential tree height.

References:

Coos Bay District 5-Point Inventory

Instruction Memorandum No. OR-95-75: Determining Site-Potential Tree Height for Initial Riparian Reserve Widths.

McArdle, R.E. 1961. The Yield of Douglas Fir in the Pacific Northwest. Tech Bull 201. USDA, Washington, D.C.